

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APPLICATION NO.: 09/855,652

REMARKS

Upon entry of this amendment, claims 1, 2, 5, 6 and 9-46 are all the claims pending in the application. Claims 3, 4, 7 and 8 have been canceled by this amendment. Claims 44-46 have been added as new claims. No new matter has been added.

I. Drawings

Applicant submits herewith a replacement sheet for Fig. 3 incorporating the proposed drawing correction that was approved by the Examiner in Paper #8. Accordingly, the Examiner is respectfully requested to indicate that the drawings are accepted in the next Office paper.

II. Claim Objections

Claims 41-43 are objected to because the Examiner asserts that the terms “electrodes” and “insulating film” lack proper antecedent basis. In particular, the Examiner asserts that multiple electrodes and insulating films are claimed and that it is unclear which electrodes are insulating film claims 41-43 are referring to.

Applicant has amended claims 41-43 so as to more clearly define the electrodes and insulating film. Accordingly, Applicant requests that the Examiner reconsider and withdraw the objection.

III. Claim Rejections under 35 U.S.C. § 102(a)

Claims 1-8, 11, 12, 15, 16, 19, 20, 25, 26, 29, 31 and 33-40 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Applicant's admitted prior art. Applicant respectfully traverses this rejection on the following basis.

Claim 1 recites the feature of a second insulating film being formed thicker than a first insulating film, wherein a solid state-image pickup region has only the first insulating film provided thereon. Further, claim 1 recites that an isolating electrode is formed on the second insulating film. Applicant submits that the claimed combination, including at least these feature, is neither disclosed nor suggested by the admitted prior art.

The admitted prior art discloses a peripheral circuit region which comprises a solid-state image pickup region (left section as shown in Fig. 2A), a peripheral circuit region transistor portion (middle section as shown in Fig. 2A) and a peripheral circuit region P well contact portion (right section as shown in Fig. 2A).

The Examiner asserts that element 637 corresponds to an isolating electrode. Assuming, for the sake of argument alone, that element 637 can be interpreted as an isolating electrode, Applicant submits that element 637 is not formed on a second insulating film as set forth in claim 1. Rather, element 637 is shown as being formed on an insulating film having the same thickness as the insulating film in the solid-state image pickup region (i.e., the first insulating film).

Thus, as the insulating film on which element 637 is formed is not thicker than the insulating film in the solid-state image region, Applicant respectfully submits that the admitted

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APPLICATION NO.: 09/855,652

prior art does not disclose or suggest an isolating electrode formed on a second insulating film as set forth in claim 1. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection.

Claims 2, 5, 6, 11, 12, 15, 16, 19, 20, 25 and 26 depend from claim 1 and therefore incorporate all of the features thereof. Accordingly, Applicant submits that these claims are patentable at least by virtue of their dependency. As discussed above, claims 3, 4, 7 and 8 have been canceled by this amendment.

In addition, claim 6 sets forth the feature of a third insulating film formed thinner than the first insulating film on the surface of the semiconductor substrate in the peripheral circuit region. As discussed above, claim 1 (from which claim 6 depends) sets forth that the solid-state image pickup region has only the first insulating formed thereon.

As clearly shown in the admitted prior art, gate insulating film 606 is the only insulating film formed in the solid state image pickup region. Further, as there are no insulating films formed in the peripheral circuit region that are thinner than insulating film 606, it is clear that the admitted prior art does not disclose the feature of a third insulating film formed thinner than the first insulating film, as is set forth in claim 6. Accordingly, Applicant respectfully requests that the rejection of claim 6 be reconsidered and withdrawn.

Claim 29 sets forth the features of a first insulating film formed on a surface of the solid-state image pickup region and an isolating electrode formed on a second insulating film. Applicant submits that the admitted prior art fails to disclose or suggest such features. That is, as the admitted prior art shows only insulating film 606 formed on a surface of the solid-state image

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APPLICATION NO.: 09/855,652

pickup region, it is clear that the admitted prior art does not disclose the feature of an isolating electrode formed on a second insulating film, as is set forth in claim 29.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 29. Claims 31 and 33-40 depend from claim 29 and therefore incorporate all of the features thereof. Accordingly, Applicant submits that claims 31 and 33-40 are patentable at least by virtue of their dependency.

IV. Claim Rejections under 35 U.S.C. § 103(a)

A. Claims 9, 10, 13, 14, 17, 18, 21, 22, 30 and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art. Claims 9, 10, 13, 14, 17, 18, 21 and 22 depend from independent claim 1. Claims 30 and 32 depend from independent claim 29. Accordingly, Applicants submits that these claims are patentable at least by virtue of their dependency.

B. Claims 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Takeda et al. (U.S. Patent No. 5,591,963). Claims 23 and 24 depend from independent claim 1. Furthermore, Applicant submits that Takeda fails to cure the deficiencies discussed above regarding claim 1. Accordingly, Applicants submits that these claims are patentable at least by virtue of their dependency.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APPLICATION NO.: 09/855,652

C. Claims 27 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Sasaki et al. (JP 03-174772). Claims 27 and 28 depend from claim 1. Applicant submits that Sasaki fails to cure the deficiencies discussed above regarding claim 1. Accordingly, Applicant submits that these claims are patentable at least by virtue of their dependency.

V. Allowable Subject Matter

Applicant thanks the Examiner for indicating that claims 41-43 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant submits that base claim 29 is allowable for the reasons discussed above and, therefore, claims 41-43 have not been written in independent form at this time.

VI. New Claims

Claims 44-46 are added as new claims. Applicant submits that these claims patentably distinguish over the cited prior art based on the combination of features recited therein.

VII. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Submitted herewith is a Petition For Extension of Time with fee.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APPLICATION NO.: 09/855,652

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

Kenneth Fields

Kenneth W. Fields
Registration No. 52,430

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: November 18, 2003